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Cancelled.*

16. The method of claim 15 further comprising the step of optically decoupling light from said optical pumped light source from said amplified optical signal prior to said step of detecting said amplified signal.

17. The method of claim 16 wherein said light-guiding object comprises a fibre optical waveguide.

**Remarks**

By the foregoing Amendment, claims claims 1 – 8 are cancelled and new claims 9 – 17 are presented. Entry of the Amendment, and favorable consideration thereof is earnestly requested.

The Examiner has rejected claims 1 – 8 under 35 U.S.C. §112 first and second paragraph for failing to particularly point out and distinctly claim the invention and for containing subject matter not described in the specification in an enabling manner.

The Examiner has further objected to the form of the Abstract. A new Abstract is submitted herewith.

Applicant has cancelled the original claims and now presents new claims 9 – 17 for the Examiner's consideration. Applicant respectfully submits that the new claims satisfy the requirements of 35 U.S.C. §112.

Regarding the inquiries raised by the Examiner in the Office Action, the new claims now more clearly point out the claimed invention. The synthetic material of the light-guiding object is capable of undergoing a population inversion by energetic excitation. Upon introduction of the optical signal into the light-guiding object, the optical signal is elastically dispersed by the synthetic material creating a radiation component of the optical signal in the direction of the propagation path along which light travels in the light-guiding means. It is the radiation component of the optical signal stimulating emission from the population inverted synthetic material that ultimately

amplifies the optical signal for detection. Thus, the elastic dispersion of the optical signal does not produce light or amplify the signal, rather the stimulated emission from the synthetic material amplifies the optical signal. The elastic dispersion by the synthetic material merely changes the optical signal's direction.

In light of the above Amendments and Remarks, Applicant respectfully submits that the new claims presented are in condition for consideration by the Examiner.

Respectfully submitted,



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